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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/227,398	01/08/1999	KENT K. LEUNG	CISCP077	8362
22434	7590	01/30/2004	EXAMINER	
BEYER WEAVER & THOMAS LLP			MEHRPOUR, NAGHMEH	
P.O. BOX 778			ART UNIT	PAPER NUMBER
BERKELEY, CA 94704-0778			2686	26

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/227,398

Applicant(s)
Kent K. Leung

Examiner
Naghme Mehrpour

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2686



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Oct 8, 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7, 12-14, 18, 22-29, 32, 36, 39-45, and 47-56 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 12-14, 18, 22-29, 32, 36, 39-45, and 47-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 24 6) ☐ Other:

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Information Disclosure Statement

1. The information disclosure statement filed reference listed in the information Disclosure submitted on 09/02/03 have been considered by the examiner (see attached PTO-1449).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-4, 7, 12-14, 18, 22-26, 32, 37-38, 41-45, 47-55,** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rai et al (US Patent Number 6,377,982 B1) in view of Zhang et al. (US Patent 6,119,160).

Regarding **Claims 1, 3, 13, 23, 37, 43**, Rai teaches a network device which supports mobile IP and is configured to send an accounting request, the accounting request identifying a mobile node (col 6 lines 33-41), the network device comprising:

a memory (see figure 22, raw accounting data Buffer);

a processor coupled to the memory (see figure 22), wherein the network device and plurality of mobile nodes each of the plurality of network devices a Home Agent or a Foreign Agent (see figure 15) adapted for sending an accounting request to the server being a Home Agent or a Foreign Agent adapted for sending an accounting request to the server (see figure 22) associated with a mobile node supported by a plurality of Home Agents (see figure 1, col 6 lines

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18-41, lines 45-55, col 7 lines 38-57), and each of the plurality of network devices a Home Agent or a Foreign Agent sending information to the server to update accounting information associated with a mobile node (col 23 lines 28-50), the network device adapted for sending the accounting request to a server in response to a trigger event identifying the mobile node initiation or termination of a registration of the mobile node (col 23 lines 30-60). Rai fails to teach the trigger event including the counter, the trigger being a lapse of a predetermined period of time **and wherein the server is not a Home agent or a foreign agent**. However Zhang teaches computer network access points capable of multiple-level accounting. The gateway device communicates with an accounting server which stores the accounting requests and matches start requests with subsequent stop requests (col 2 lines 19-23), and each of the plurality of network devices a Home Agent sending information to the server to update (Col 7 lines 65-67, col 8 lines 1-8) information associated with a mobile node, and the network device including counter (col 2 lines 23-31), and in response to a trigger event, the trigger being a lapse of a predetermined period of time, initiation of termination of a registration of the mobile node wherein **the server is not a Home agent or a foreign agent** (see figure 1, server AAA), figure 1, shows that system uses server AAA, not Home agent and Foreign agent. Therefore, it would have been obvious to the ordinary skill in the art at the time the invention was made to provide the above teaching of Zhang with Rai, in order to enable the corporate users accessing network from home or while on the road, while the end users only pay for the cost of connecting to corporate remote access.

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Regarding **Claims 2, 25, 29**, Rai teaches a network device received and send packets by the mobile node (col 7 lines 45-54), and each of the plurality of network devices a Home agent sending information to the server to update (col 43 lines 40-63). Rai fails to teach a counter that counts a total service time for the mobile node. However Zhang teaches a system wherein a network device counter that counts a total service time for the mobile node. However Zhang teaches a computer network access points capable of multiple-level accounting. The gateway device communicates with an accounting server which stores the accounting requests and matches start requests with subsequent stop requests (col 2 lines 19-23), and each of the plurality of network devices a Home agent sending information to the server to update (Col 7 lines 65-67, col 8 lines 1-11) information associated with a mobile node, and the network device including counter (col 2 lines 23-31), and in response to a trigger event, the trigger being a lapse of a predetermined period of time, initiation of termination of a registration of the mobile node wherein **the server is not a Home agent or a foreign agent** (see figure 1, server AAA), Zhang shows in figure 1, that sever AAA is used not Home agent server or Foreign agent. Therefore, it would have been obvious to the ordinary skill in the art at the time the invention was made to combine the above teaching of Zhang with Rai, in order to keep track of number times that system registers. Zhang teaches a counter, a service establishments and the Point to Point protocol (PPP) connections between the gateway device and public and private domains within the network. The counter is capable of tracking the duration of sessions and connections and the byte-count associated with the specified session or connection. Therefore, it would have been

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obvious to the ordinary skill in the art at the time the invention was made to combine the above teaching of Zhang with Rai, in order to keep track of number times that system registers, in order to provide compatibility with the existing protocols.

Regarding **Claims 4, 14, 28, 38**, Rai teaches a server that is adapted for sending an accounting reply to the network device in response to the accounting request (col 6 lines 34-41), and accounting reply acknowledging logging of the accounting information pertaining to the mobile node (col 18 lines 3-11, col 19 lines 8-12).

Regarding **Claims 7, 18, 32, 41, 45**, Rai fails to teach a server wherein the counter indicates a number of registrations that have been accepted. However Zhang teaches a server wherein the counter indicates a number of registrations that have been accepted (col 10 lines 14-35). These events include the user account log on, the service establishments and the Point to Point protocol (PPP) connections between the gateway device and public and private domains within the network. The counter is capable of tracking the duration of sessions and connections and the byte-count associated with the specified session or connection (col 2 lines 17-29). Therefore, it would have been obvious to the ordinary skill in the art at the time the invention was made to combine the above teaching of Zhang with Rai, in order to keep track of number times that system registers.

Regarding **Claims 12, 22, 48, 52**, Rai teaches a server wherein the server is a RADIUS server (col 17 lines 50-65).

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Regarding **Claims 24, 26**, Rai teaches a method further including forwarding the data packet to another network device (col 22 lines 46-57).

Regarding **Claims 42, 44**, Rai fails to teach a Network device wherein the accounting request further includes a value associated with the counter. However Zhang teaches a counter, a service establishments and the Point to Point protocol (PPP) connections between the gateway device and public and private domains within the network. The counter is capable of tracking the duration of sessions and connections and the byte-count associated with the specified session or connection (col 2 lines 23-31). Therefore, it would have been obvious to the ordinary skill in the art at the time the invention was made to combine the above teaching of Zhang with Rai, in order to keep track of number times that system registers.

Regarding **Claims 49-51**, Rai teaches a network wherein the server is a AAA server and accounting request is sent in accordance with a AAA server protocol (col 23 lines 30-60).

Regarding **Claims 53-55**, the combination of Rai modified by Zhang fails to teach the network device wherein the server does not support Mobile IP. However the Examiner takes official notice a network wherein does not support Mobile IP node, is well known in the art. Therefore, it would have been obvious to the ordinary skill in the art at the time the invention was made to combine the above teaching of with the combination of Rai with Zhang, in order to enable the corporate users accessing network from home or while on the road, while the end users only pay for the cost of connecting to corporate remote access.

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4. **Claims 27-29, 36, 39-40, 56**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Rai et al (US Patent Number 6,377,982 B1) in view of Zhang et al. (US Patent 6,119,160). Regarding **Claims 27, 39**, Zhang teaches a **AAA server** /computer-readable medium **that does not support IP** (col 3 lines 50-59) a method of updating accounting information for a mobile node operating according to Mobile IP protocol (col 3 lines 53-56) comprising:

receiving a request packet from a network device operating under Mobile IP Protocol, **the request packet being sent in accordance with a AAA server protocol (col 4 lines 16-20)**, the request packet identifying the mobile node and including at least one counter associated with accounting information pertaining to mobile node (col 4 lines 36-41), a total service time for the mobile node (col 2 lines 20-23), indicating at least one of a number of packets that have been sent from the mobile node, a total time for the mobile node (abstract, col 2 lines 19-23), number of bytes that have been sent to the mobile node and a number of bytes that been sent from the mobile node (col 2 lines 23-31); and

instructions logging the accounting information for the mobile node identified in the request packet using the at least one counter of the request packet (col 4 lines 36-41).

Zhang fails to teach that the network device being a Home Agent or foreign Agent supporting the mobile node. However Rai teaches a communication system wherein Mobile IP standard are commonly referred to as a foreign agent (FA) (col 7 lines 33-46). Therefore, it would have been obvious to the ordinary skill in the art at the time the invention was made to combine the above

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teaching of Rai with Zhang, in order to provide low cost deployment, ease of maintenance and ability to degrade gracefully under heavy load condition.

Regarding **Claims 28, 40**, Zhang teaches a that is adapted for sending an accounting reply to the network device in response to the accounting request (col 6 lines 34-41), and accounting reply acknowledging logging of the accounting information pertaining to the mobile node (col 18 lines 3-11, col 19 lines 8-12).

Regarding **Claim 29**, Zhang teaches a method further comprising: generating a bill for Mobile IP service from the accounting information (col 2 lines 35-40).

Regarding **Claim 56**, Zhang teaches a method wherein the server is not a Home Agent or a Foreign Agent (see figure 1). Figure 3 shows that server, is AAA server, not Home agent or Foreign agent server.

Response to Arguments

5. Applicant's arguments with respect to claims 1-4, 12-14, 18, 22-29, 36-3-45, 47-56, have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any responses to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308--6296, (for formal communications intended for entry)

Or:

(703) 308-6306, (for informal or draft communications, please label

“PROPOSED” or “DRAFT”)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, Va., sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

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Any inquiry concerning this communication or earlier communication from the examiner should be directed to Melody Mehrpour whose telephone number is (703) 308-7159. The examiner can normally be reached on Monday through Thursday (first week of bi-week) and Monday through Friday (second week of bi-week) from 6:30 a.m. to 5:00 p.m.

If attempt to reach the examiner are unsuccessful the examiner's supervisor, Marsha Banks-Harold be reached (703)305-4379.

NM

Jan 15, 2004

Marsha D Banks-Harold
MARSHA D. BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600